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UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
John D. Hottovy

Serial No.: 10/699,151

Filed: October 31, 2003

For: Method and Apparatus for Reducing
Reactor Fines

§ Confirmation No.: 1478
§
§ Group Art Unit: 1796
§
§ Examiner: Cheung, William K.
§
§
§ Atty. Docket: CPCM:0020
§ 210330US00

Mail Stop Appeal Brief-Patents
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April 14, 2008

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Florian C. Faries

Florian C. Faries

**REPLY BRIEF PURSUANT TO 37 C.F.R. § 41.41 AND IN RESPONSE
TO THE EXAMINER'S ANSWER MAILED FEBRUARY 13, 2008**

This Reply Brief is being filed pursuant to 37 C.F.R. § 41.41 and in response to the Examiner's Answer mailed on February 13, 2008. Specifically, this Reply Brief addresses the Examiner's continuing pattern of misinterpretation of Stanley et al., U.S. Patent No. 3,244,681 (hereinafter "Stanley") and the pending claims. However, in the interest of brevity, Appellants address below only those issues or arguments raised the Examiner's Answer that are particularly noteworthy. In view of Appellants' attempt to avoid repetition in this Reply, Appellants respectfully request that the Board consider Appellants' complete arguments set forth in the previously filed Appeal Brief.

The Examiner rejected the sole independent claim 1 under 35 U.S.C. §103(a) based on the Rohlfinding reference. The Examiner acknowledged that the cited reference does not disclose *a root mean square surface roughness less than about 120 micro inches*, as recited in claim 1. See Examiner's Answer, page 4; Office Action Mailed July 10, 2006, page 4. However, the Examiner incorrectly asserted that it would have been obvious to one of ordinary skill in the art to polish the inner surface of the Rohlfinding loop reactor to a root mean square surface roughness less than about 120 micro inches to reduce fouling in the reactor. See Examiner's Answer, page 4; Office Action Mailed July 10, 2006, page 5; see also *In re Lee*, 61 U.S.P.Q.2d. 1430 (Fed. Cir. 2002) (holding that the Examiner must provide objective evidence, rather than subjective belief and unknown authority, of the suggestion to combine or modify the cited references).

The Examiner provided no appropriate reason to modify the Rohlfinding loop reactor to such a level of smoothness. For example, there is no indication that fouling would be further reduced in Rohlfinding if the Rohlfinding reactor surfaces were further polished to read on the instant claim. "[R]ejections based on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." See *KSR Int'l Co. v. Teleflex, Inc.*, 82 U.S.P.Q.2d 1385 (U.S. 2007). (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)) (stating that the obviousness analysis should be explicit). Rohlfinding is directed to techniques for relieving excessive pressure from the reactor, and makes an introductory unrelated comment in the background discussion that the reactor walls are

smooth to reduce fouling. *See* Rohlring, col. 1, lines 60-65. Such a nonspecific statement in Rohlring does not teach or suggest the finish of a surface having a roughness less than about 120 micro inches, as claimed. One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

In contrast, the present application discloses and claims specific processes for conducting polymerizations in reactors having a maximum surface roughness, and also for generating and maintaining such a maximum surface roughness. *See, e.g.*, Application, pages 4-5, ¶¶ 19-21. Further, as indicated in the present specification, Appellant believes that the walls of loop reactors (such as the Rohlring reactor) in the prior art possess a roughness *greater* than 125 micro inches. *See* Application, page 7, ¶ 28 (“Known slurry loop reactors have root mean square surface roughness values of 125 or greater (in units of micro inches).”).

In sum, while the Rohlring reference mentions “a tubular closed loop reaction zone having smooth surfaces,” the cited reference is absolutely devoid of the teaching or suggestion of a loop reactor surface having a *root mean square surface roughness less than about 120 micro inches*. *See* Rohlring, col. 1, lines 60-65. Furthermore, again, there is no appropriate reason to modify the Rohlring reference to have a smoother surface. As mentioned, there is no indication that fouling would be further reduced in Rohlring if the Rohlring reactor surfaces were further polished to read on the instant claim. For these

reasons, claim 1 and its dependent claims 2-6 are patentable over the cited reference.

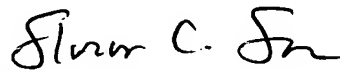
Therefore, Appellant respectfully requests that the Board direct the Examiner to withdraw the rejection and allow claims 1-6.

Lastly, Appellant would like to address the Examiner's discussion of units for smoothness (or roughness) in the Examiner's Answer. Appellants are not basing patentability on a specific unit employed to described roughness, but on a measurable quantity of roughness (which is readily measurable). To compare a reference with the instant claim, a reference could measure and disclose roughness in any units, which would be readily converted to any units for comparison to the subject matter of the instant claim. Apparently, the Examiner would suggest that a claim directed to a reactor that is 300 feet in height, for example, would be obvious in view of a disclosure that taught a *tall* reactor (with no disclosed or indicated numerical values units for height) based on any possible reason to have a taller reactor.

Conclusion

The foregoing are only reiterative points regarding the reasons why the pending claims are allowable. Appellant relies upon all of the reasons advanced in the Appeal Brief, and respectfully requests that the Board carefully review the claims in view of these arguments and indicate the allowability of the claimed subject matter.

Respectfully submitted,



Date: April 14, 2008

Floron C. Faries
Reg. No. 59,991
FLETCHER YODER
P.O. Box 692289
Houston, TX 77269-2289
(281) 970-4545